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BEARING SEAL DEVICE FOR WATER PUMP, BEARING FOR WATER PUMP AND WATER PUMP
FOR WATER-COOLED ENGINE FOR AUTOMOBILE

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INVENTOR(s): MIYAKE NOBUHIKO
IWAKIRI SHIGERU
APPLICANT(s): NIPPON SEIKO KK
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ABSTRACT

PROBLEM TO BE SOLVED: To provide a bearing seal device for a water pump, a bearing for a water pump, and a water pump for a water-cooled engine for an automobile to approximately reliably prevent permeation of cooling water and steam about to permeate the internal part of a bearing and prevent outflow of grease in a bearing.

SOLUTION: A seal ring on the impeller side comprises a seal ring 151 on the outer ring consisting of a reinforcing ring, a first auxiliary lip 1512, a main lip 1513, both formed of an elastic body, such as rubber or synthetic resin, and a second auxiliary lip 1514 positioned further on the outside diameter side than the main lip 1513; and a seal ring 152 on the shaft side consisting of a first cylinder part 1521 securely fitted in a shaft body, an intermediate part 1522 extending to the outside diameter side therefrom, and a second cylinder part 1523 axially extending in succession thereto, and rotated with a shaft body. In this case, the main lip 1513 makes slide contact with the outer peripheral surface of the first cylinder part 1521 of the seal ring 152 on the shaft side, the first auxiliary lip 1512 makes slide contact with the outer peripheral surface of a rotary member located further inside in an axial direction than the main lip 1513. The second auxiliary lip 1514 makes slide contact with the seal ring 152 on the shaft side in a position on the further outside diameter side than the main lip 1513, and the part, extending to the outer diameter side, of the seal ring 152 on the shaft side constitutes a labyrinth seal between the seal ring 151 on the outer side and the outer ring 101.

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